



# UNITED STATES PATENT AND TRADEMARK OFFICE

H.D  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,284	06/27/2001	Kyoung Sub Kim	8733.438.00	1850
30827	7590	07/18/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			WARREN, MATTHEW E	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/891,284	Applicant(s) KIM ET AL.	
	Examiner Matthew E. Warren	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to the Amendment filed on April 14, 2006.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Prior Art Figure 3 (APAF) in view of Suzuki et al. (US 5,637,007).

In re independent claims 1 and 3, the APAF (fig. 3) shows a lamp apparatus for a liquid crystal display comprising a lamp (2) for generating light, a wire (3) for supplying external electric power to the lamp, a soldering (4) for connecting the lamp to the wire, a holder (5) for enclosing the soldering, and a lamp housing (1) for enclosing the holder and the lamp. The APAF shows all of the elements of the claims except the resin in the holder between the soldering and the holder. Suzuki et al. shows (fig. 1) a connector structure in which a housing (2) including wires (3) are connected to a terminal (4) by solder (col. 3, lines 62-67). A resin (10) fills a cavity (5) to provide a seal and fix the wires to their terminals (col. 4, lines 18-28). If the resin of Suzuki et al. is applied to the holder of the APAF, then the solder of the combined invention would inherently resist external forces as the applicant's claimed invention does because the same materials

and structure are used. Furthermore, when the resin of Suzuki et al. is applied to lamp apparatus of the APAF, then the resin will be between both the soldering and the holder and the wire and the holder. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lamp housing of the APAF 3 by inserting resin into the holder portion and enclose the wire at the end of the housing as taught by Suzuki to seal the cavity and fix wires to their terminals.

In re claim 4, the APAF 1 shows the lamp apparatus is installed at each side of the liquid crystal display case.

In re independent claims 5, 8, and 10, the APAF (figs. 3 and 4) shows a lamp apparatus for a liquid crystal display comprising a lamp (2) for generating light, a wire (3) for supplying external electric power to the lamp, and a lamp housing (1) for enclosing the lamp and the wire, wherein a first portion of the wire contacts a first portion of the lamp housing. The apparatus also includes a second portion of the lamp housing (the holder 5 having a cavity enclosing the wire and solder) in which the wire does not make contact. The APAF shows all of the elements of the claims except the resin provided at an end of the lamp housing in such a manner to enclose the wire at the end of the lamp housing, wherein the resin separates the wire from the lamp housing at a second portion of the lamp housing. Suzuki et al. shows (fig. 1) a connector structure in which a housing (2) including wires (3) are connected to a terminal (4) by solder (col. 3, lines 62-67). A resin (10) fills a cavity (5) to provide a seal and fix the wires to their terminals (col. 4, lines 18-28). If the resin of Suzuki et al. is

applied to the holder of the APAF, then the solder of the combined invention would inherently resist external forces as the applicant's claimed invention does because the same materials and structure are used. Furthermore, when the resin of Suzuki et al. is applied to lamp apparatus of the APAF, then the resin will be between both the soldering and the holder and the wire and the holder. The holder of the APAF is the second portion of the lamp housing in this case and when the resin of Suzuki fills the cavity of the holder, then it separates the wire from the housing. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lamp housing of the APAF 3 by inserting resin into the holder portion and enclose the wire at the end of the housing as taught by Suzuki to seal the cavity and fix wires to their terminals.

In re claims 6, 11, and 12, the APAF 3 shows a soldering (4) electrically connecting the lamp to the wire and a holder (5) passing through the lamp housing to enclose the lamp, wire and the soldering.

In re claim 9, the APAF 1 shows the lamp apparatus is installed at each side of the liquid crystal display case.

Claims 2, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 3 (APAF) in view of Suzuki et al. (US 5,637,007) as applied to claims 1, 5, and 10 above, and further in view of Saito (JP 4-46314).

In re claims, 2, 7, and 13, the APAF in view of Suzuki et al. shows all of the elements of the claims except the specific material of the resin. Saito discloses

(abstract and fig. 4) an LCD element having a resin material of epoxy (12) at an end of device to form a reliable seal without bubbles or moisture. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the resin of the APAF and Suzuki by using specific resins such as epoxy as taught by Saito to form a reliable seal.

### ***Response to Arguments***

Applicant's arguments filed with respect to claims 1-4 have been fully considered but they are not persuasive. The applicant primarily asserts that the prior art references do not show all of the elements of the claims, specifically that the Applicant's Prior Art Figures (or ARA) and Suzuki do not show that a resin is "filled in a cavity formed in the holder having the soldering and the wire." The examiner believes that the prior art references show all of the elements of the claims. As stated in the rejection above, the ARA figure 3 already shows that the holder has a cavity that contains the soldering and the wire. When the resin of Suzuki is combined with the ARA, the resin fills the cavity having the solder and wire of the lamp apparatus just as the resin fills the cavity of Suzuki that contains wires and connecting terminals (solder). Furthermore, Suzuki alone shows the limitation in question. Suzuki's figure 1 shows that housing (7) has a cavity (5) containing wires (3) and solder (not shown but disclosed in col. 3, lines 62-67). Therefore, the resin (10) is filled in the cavity formed in the holder having the soldering and the wire.

Applicant's arguments filed with respect to amended claims 5-13 have been fully considered but they are not persuasive. The applicant primarily asserts that the prior art references do not show all of the elements of the claims, specifically that the Applicant's Prior Art Figures (or ARA) and Suzuki do not show the added limitation of the resin separating the wire from the lamp housing at a second portion of the lamp housing. As stated in the rejection above, the holder is considered a second portion of the lamp housing. Since the claims were amended to delete limitations pertaining to the cavity in the holder, the holder of the APAF now becomes the second portion of the housing. As shown in the APAF 3 and 4, the wire in the holder portion (second portion of the housing) is already spaced from the lamp housing. When the resin of Suzuki fills the cavity of the holder, the resin separates the wire from the second portion of the lamp housing. The applicant intended to further define the claims with the present amendment but in fact have made the claims more broad. Thus, the prior art references, when combined, show all of the elements of the claims. The 35 USC 103 rejection above is still proper and shall remain.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2815

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEW  
*MEW*

July 7, 2006



KENNETH PARKER  
SUPERVISORY PATENT EXAMINER